

### **REMARKS**

Claims 1-7, 23, and 25 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

The Applicants would like to thank the Examiner for the interview given on April 14, 2005. During the interview, no particular claims were discussed and no agreement was reached regarding the allowance of any of the claims.

### **SPECIFICATION**

The Applicant has amended the specification to correct some minor typographical errors. As originally filed, in Example 2, it was noted that the alumina coated Silica Sol, given the trade name number 1056 by Nalco Chemicals, included a 20% solids composition. Nevertheless, one generally skilled in the art would know that the composition actually includes 30% solids, 26% as silicon dioxide and 4% as alumina. Such concentrations are referenced the Advanced Technical Data Sheet (Tab A) from Nalco Chemical Company that is clearly dated before the filing date of the present application.

Similarly, under Example 3, the Silica Sol given the trade number 2327 by Nalco Chemicals was incorrectly noted to include only 20% solids. Nevertheless, one skilled in the art would understand, according to the technical sheets (Tab B) provided by Nalco Chemicals, that the Silica Sol would actually include a solids concentration of 40% as silicon dioxide.

Therefore, the Applicant submits that the amendments to the Specification do not include new subject matter and one skilled in the art would clearly understand that the concentrations originally given were incorrect and that the new concentrations are correct as illustrated in the brochures and materials from the supplier of the named products. Therefore, the Applicants submit that such amendments are proper and request that they be made to the present application.

#### **REJECTION UNDER 35 U.S.C. § 112**

Claims 1-7 and 23 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

Claims 2 and 3 have been non-narrowingly amended to overcome the Examiner's rejection. Therefore, the Applicants request that the Examiner withdraw the rejections under Section 112 to Claims 2 and 3.

Independent Claim 1 has been amended to indicate that the sol gel and the alumina particles can be mixed and the mixture can surround a ceramic fiber. Therefore, the Applicant submits that the rejection under Section 112 should be removed and requests that the Examiner do so.

Claim 23 recites that "said sol gel includes a solids content of about 20 weight percent." This depends from independent Claim 1 which recites that a sol gel can comprise about 10 wt% to about 60 wt%. Therefore, the Applicants submit that dependent Claim 23 narrows the range originally cited in independent Claim 1.

### **REJECTION UNDER 35 U.S.C. § 102**

Claims 1-4 and 23 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kalinowski (U.S. Pat. No. 5,129,919). Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Carman (U.S. Patent No. 5,160,509). These rejections are respectfully traversed.

Both Kalinowski and Carman disclose a composition for forming a slurry. In particular, Kalinowski describes an abrasive material that includes sintering a sol gel and then forming an abrasive material from the sintered sol gel. Carman merely describes that a medium can be heated which burns off a material that acts as a blank to form an abrasive wheel. Therefore, neither Kalinowski nor Carman teach or fairly suggest the composition recited in independent Claim 1.

Because Kalinowski and Carman do not anticipate each of the elements of independent Claim 1, it is in condition for allowance, including each of the claims that depend directly or indirectly therefrom.

### **CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the

Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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## Advance Technical Data Sheet

# NALCO<sup>®</sup> 1056

*Alumina-Coated Silica Sol*

### General Description

NALCO 1056 is an aqueous dispersion of sub-micron alumina-coated particles. NALCO 1056 was designed for use in a variety of applications where both the colloidal nature and positively-charged particle surface are desirable. Coating a silica particle core with alumina yields a product with the cost advantage of a silica sol while maintaining the surface properties of a pure alumina sol.

### Properties

Appearance .....	blue, opalescent liquid
Alumina (as Al <sub>2</sub> O <sub>3</sub> ).....	4%
Silica (as SiO <sub>2</sub> ) .....	26%
Avg. Particle Size .....	20 mμ
Specific Gravity @ 68°F.....	1.23
pH .....	4.2
Viscosity .....	<15 cps
Surface Charge .....	positive
% Chloride .....	<1.5%
Conductivity .....	<16,000 μmhos

NALCO 1056 is stable for long periods of time at room temperature. Unlike colloidal silica, its properties are unaffected by freezing. The precipitate formed by freezing is redispersible. The product is very sensitive to salt concentration and may gel in the presence of anionic surface agents. NALCO 1056 is stable in the pH range of two to six. As the product contains positively-charged particles stabilized with chloride ions, its resultant high conductivity may cause problems in some applications.

NALCO 1056 may find application in the areas of waterproofing intermediates, binders for glass and ceramic fibers, suspension aids in acidic systems, emulsifiers, reinforcing agents, dust and dirt repellents, adsorbents, and catalyst supports.

### Shipping

NALCO 1056 is shipped in 5-gallon pails and 55-gallon non-returnable drums, 275-gallon non-returnable totes and in 200 and 400-gallon returnable PORTA-FEED<sup>®</sup> units.

### Remarks

If you need assistance or information, please call your nearest Nalco representative, or our Naperville office at (630) 305-1000.

**For Medical and Transportation Emergencies** involving Nalco products, call (24-hour response) 1-800-I-M-ALERT or (800) 462-5378.

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**PRODUCT BULLETIN**

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**NALCO<sup>®</sup> 2327***Colloidal Silica Dioxide***Product Benefits**

NALCO 2327 is a colloidal dispersion of submicron-sized silica particles in the form of tiny spheres, in an alkaline aqueous solution. NALCO 2327 has a negative surface charge and is ammonium stabilized. NALCO 2327 offers the following benefits:

- Low sodium for improved high temperature use
- High silica concentration
- Narrow particle size distribution

**Principal Uses**

- Binder support and silica source for catalysts
- Binder or coating for high temperature insulation
- Abrasion resistant and adhesion-promoting additive for various polymeric coatings.
- Detackifying and antiblocking agent for organic films
- Source of pure silica for manufacture of synthetic silica-containing materials
- Antislip agent for wax emulsion formulations

**General Description**

NALCO 2327 is a stable liquid dispersion of discrete submicron spherical particles of colloidal silica. The following are typical properties (not specifications) of NALCO 2327:

Colloidal Silica as SiO <sub>2</sub>	40%
pH (@ 25°C)	9.3
Average Particle Diameter	20nm
Specific Gravity (@ 25°C)	1.29
Viscosity (@ 25°C)	20 cp
Na <sub>2</sub> O	0.08%

**Dosage**

Since process requirements vary widely, your Nalco representative will advise you on dosages after studying your operation and application needs.

**Handling and Storage**

**CAUTION:** Inhalation of mists or dusts may be harmful. Avoid repeated or prolonged breathing of spray mists or dust. Avoid contact with skin, eyes, and clothing. Do not take internally. Keep container closed when not in use. NALCO 2327 may be stored for up to one year at 40-90°F. Prevent exposure to temperatures below 32°F, as freezing causes irreversible precipitation of the silica. Storage in aluminum is not recommended. Storage equipment should be made of stainless steel, fiberglass, or reinforced plastic.

**Shipping**

NALCO 2327 is shipped in 5-gallon pails and 55-gallon drums. It is also available in 200 and 400-gallon returnable PORTA-FEED<sup>®</sup> units, 275-gallon One-Way-Totes, and in tank truck shipments.

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**For Medical and Transportation**

**Emergencies** involving Nalco products, call (24-hour response) 1-800-424-9300.